Remarks as Prepared for Delivery

NASA Administrator

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Turning Goals into Reality Conference

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Thank you, Don Campbell, for that introduction, and thank you to all the people here at Lewis for hosting this important event.

Thank you, Administrator Jane Garvey, who I will say more about in a moment.

Let me also offer a special thanks to Jim Hall, Chairman of the National Transportation Safety Board for joining us today. He represents a very important perspective that we need to hear.

And thank you, Bob Stone, from Vice President Gore's National Partnership for Reinventing Government. You will hear from Bob next.

Most of all, thank you, everybody for . . . how do I say this . . . thank you for turning the Turning Goals into Reality Conference into a reality.

This is truly an historic and unprecedented meeting.

In fact, to my recollection, this is the most distinguished gathering of intellects to have met in one place to talk about the future of the aerospace industry . . . to paraphrase President Kennedy . . . with the possible exception of when the Wright Brothers dined alone.

Kidding aside, I'm thrilled you are all here.

I think the turn out for this conference really illustrates the importance of the future of our aviation and space transportation systems to our nation.

And I very much look forward to hearing from you because we are not just here to talk about our future technology needs.

We are here to assess our progress and examine our plans.

And frankly, that's a new concept for many of us.

I'm reminded of a great story about the late Supreme Court Justice Oliver Wendell Holmes who once boarded a train, but then couldn't locate his ticket.

Of course, the conductor recognized the distinguished justice.

"Your Honor," he said. "Don't worry about it. I know you can be trusted. Get us the ticket when you find it later."

Justice Holmes looked up at the conductor and said:

"Young man, the problem is not where is my ticket . . . but where am I going?"

There's a saying in the Bronx that you should never bring a knife to a gun fight. And I apologize for bringing a train story to an aviation conference.

But the point is we need to know where we are going.

Since NASA and the FAA were created in 1958, each agency has worked closely, hand-in-hand, to improve our aviation system: NASA developing the technology, and the FAA, implementing technology and operating a safe, secure, and efficient aviation system.

But we could always do better. And we need to do better.

At times, it has seemed that NASA and the FAA weren't quite sure how to work with one another and what to expect. We weren't sure how to work with industry. We didn't have goals defined. And because we didn't have goals defined, we weren't accountable.

Today, we take an important step to change that.

Shortly, Administrator Garvey and I will sign an important document that signifies the commitment of our respective organizations to improving the safety and efficiency of our air transportation systems.

This document will guarantee that NASA and the FAA will work even more closely to achieve aggressive goals assuring the public of a safer aviation system, providing rapid, affordable and dependable service for all Americans.

Ladies and gentlemen, today we know where we are going. The partnership is **firmly** in place.

Now, partnership is a word we hear used quite often today. It's one of the buzz words of the 1990's. But make no mistake: it is not a hollow buzz word to NASA and the FAA.

It is our *modus operandi*. The way we do business. It is what American taxpayers expect from their government; it is what we pledge to deliver.

And I believe it is what we will deliver.

I have so much confidence in large part because of Administrator Jane Garvey.

In just over one year, Administrator Garvey has built up a record of accomplishment and a reputation for excellence that very few can match. And what fuels that record and reputation -- as we have just heard -- is passion, focus, and vision.

Administrator Garvey . . . you are a leader who has taken the FAA to new heights. We are honored that you are here. We salute what you have done. And we look forward to the work we will do together in the future.

What I hope and trust the outcome of that work will be is supporting an aviation system that continues to soar.

There is no reason it shouldn't.

Because if you look across America today, you see a prosperous nation.

The aviation system is booming with record numbers of travelers and millions of tons of cargo being flown all over the world.

And projections for the future are good.

The FAA forecasts that air travel will nearly double today's volume of operations in just 12 years.

This is a staggering number when you consider that about 600 million people boarded commercial flights in 1997.

A growth of $520 billion in aircraft sales is forecasted through 2007 and $1.25 trillion by 2017.

There is tremendous opportunity ahead. But with all opportunity, comes responsibility.

Mainly, how are we going to handle this growth?

How are we going to meet the challenge of this increase in air traffic volume?

How do we respond to what could be an increase in accidents . . . more environmental pollution . . . and more delays for travelers?

There are some who say that these potential problems will be too much. The challenges too great to overcome. The economic boom will never get off the ground.

This is not the future America that I subscribe to. And I don't think you'd be here if you subscribed to it either.

Two years ago, I challenged NASA and our stakeholders in industry and government to reach higher and farther. I felt we needed to do more to prepare for the future. Once again, our problem wasn't that we couldn't find our ticket. We didn't know where we were going.

With that in mind, we developed technology roadmaps -- our Three Pillars for Success initiative that we unveiled in March of 1997.

The Three Pillars -- these roadmaps -- represent NASA's vision for Aeronautics and Space Transportation in the next century. And we didn't hold back.

The Three Pillars are ten "stretch" technology goals that were defined in partnership with America's great aerospace industry and our FAA and DOD partners.

But even having goals is not enough. Having the ticket in our hand was not enough. A roadmap is not an end-all.

Once in a while, you have to look out the window and make sure you're going in the right direction. That you're moving forward. That you're doing what you said you were going to do. That if conditions change with time, as they often do. . . so too might your destination.

That's why we promised to report to the public on the progress we were making.

This is our first Progress Report. *(Mr. Goldin held up report.)*

This afternoon, the panels will discuss some of the details of this report. But let me just say this: we are here today to measure the progress. You helped develop the roadmaps, now you all have the opportunity to help shape them. If we're off-course or going the wrong way, now is the time to make it right. Now is the time to plan together and work together so we can reach greater heights in the next century.

If we do, the future I see is one of a safe, clean, and affordable transportation system for air and space.

This is the future capability I see.

I see a small biomedical company -- perhaps an offshoot of Case Western Reserve University, here in Cleveland.

I see that they have developed an advanced bioreactor laboratory as part of an international commercial venture aboard the International Space Station. They have a very important customer -- a French company -- who wants to test new products in their space-based lab.

Launch is set for that evening at Kennedy Spaceport.

It's 7:00am and I see the CEO of the biomed company arrives at Hopkins Airport - it's cold and foggy.

This is Cleveland, after all. It snowed overnight, too.

Our CEO boards her company's private business jet. It costs no more than a high-end luxury automobile cost in the late 1990's.

The first leg of her journey -- to New York so she can pick up some of the company's stakeholders -- is scheduled to leave at 7:30 AM. But we're not worried about delays.

We remember a time when this weather would have been a nightmare, but today, we know the CEO will make it safely and on time.

I see that the pilot will be able to see through the fog because of high-definition synthetic vision. And I see that there won't be ice on the runway or the airplane because of environmentally friendly anti-icing fluid. The first generation of this fluid is here today!

I see that when they push away from the gate, it will only be moments until they reach the runway for take-off. I see that the pilot is using advanced taxiway navigation tools developed by NASA and the FAA.

I see that the pilot has full situational awareness of the vehicle's state of health and the surroundings.

Remote sensing satellites send signals directly to the vehicle and gives the pilot real-time knowledge about weather and terrain.

GPS navigation systems, also readily accessible by the pilot, give the precise position.

Communication links and onboard sensors determine where other vehicles and obstacles are, and an onboard computer database tells the pilot and crew where the other vehicles, obstacles and micro-disturbances in the atmosphere will be.

Together, this gives the pilot real-time, on-board, unprecedented air-traffic control. And I see that all of this has made the flight safer and faster than ever before.

I see a landing in New York -- a city that is cleaner than ever before. Along with zero-emission cars, the new generation of aircraft produce insignificant amounts of pollutants. Not only that, these aircraft are so quiet, that even with triple the number of flights, the home values around airports have grown in-line with other neighborhoods.

In New York, she meets the stakeholders, and they all board a commercial flight for the second leg of the trip . . . this one to Paris.

That's where her customer is and because this is such an important deal, she wants to go there personally to pick up the final validation results.

She's on a tight schedule . . . her departure is at 9:00am.

But with advanced in-flight navigation systems, delays are a thing of the past.

She arrives in Paris at 5:00pm.

The flight was inexpensive. It was relatively quiet. The supersonic flight took only two hours.

I see that the flight was also environmentally clean. Flying at over 60,000 feet hasn't impacted the environment because we have solved the NOx problem and the ozone layer is protected.

I see that the engineers here at Lewis had a lot to do with that.

I also see that the public and private sectors worked together to make absolutely sure that regulatory policy did not outpace the revolutionary advances in technology.

Once in Paris, the CEO and the stakeholders head for the exit. Instead of following the arrows to ground transportation, they head off to the air taxi service. Small aircraft are so safe, affordable and easy to fly, that many friends and colleagues own them. More importantly, I see that this has become so affordable, that all around the world air taxi services have become profitable businesses.

They meet with the French customers, have time for a nice dinner, and depart back for the States at 9:00 PM.

The third leg is directly to Florida.

They arrive in Florida at 5:00pm Eastern time. Again, the flight is only a couple of hours.

It's a long-day, but in anticipation of a brilliant night launch lighting up the sky, our CEO is not tired at all. But even more than the sight of the launch, she's excited because she knows that people in Florida have been going through the pre-launch checks for her customers' payloads on the affordable commercial Reusable Launch Vehicle.

In the Space Station laboratory, her company is growing a number of human tissue samples. I see that these tests will verify the cancer-fighting ability of a variety of drugs.

Having low-cost access to the Space Station means not only opening business horizons, but perhaps also creates life-saving products that could benefit millions. Knowing this she proudly watches the successful launch.

She boards the personal business jet which is now waiting for her at Kennedy.

She returns home to Cleveland. The next day is sunny and warm.

I see a mission accomplished.

We're already working on some of these technologies. Others are a little more far out. But the point is that our Nation must look far into the future and prepare for it. We can't be afraid of failure. We must commit to long-term collaborations and investments in research.

That's what we hope our Three Pillars and Ten Goals will do.

We intended for them to be tough . . . to push the envelope. But even though they are admittedly "stretch" goals, that does not mean they are enough, or even the right goals.

Perhaps they are the right goals now, but not tomorrow. Our roadmaps may call for a new route.

That's why we need you onboard -- to help us not only accomplish this, but to work with us each step of the way as our plans take shape.

We have learned a lot over the last year and a half about how difficult the goals may be. We have a grasp of what research is needed to take to get us to the 10-year mark. But now is the time to be heard.

We want to validate with you that these are the right goals. And that means asking fundamental questions.

* Do we know where we're going?

* Are we headed in the right direction?

* Are the goals tough enough?

* If they are, are we prepared to commit to them?

The roadmaps simply lay the groundwork for the next research challenge. They were developed and continue to develop to ensure that there **IS** a path that goes from today's research into tomorrow's systems.

In your conference packages, there are two booklets to serve as starting points for you to review and comment on.

Please do.

We want to work with local governments, state governments, the FAA and other federal agencies. We want to work with individual companies, large and small, and with universities and other research laboratories. We don't want to be seen as having "possession" over the goals. We want to be seen as being one of the partners who was responsible for Turning Goals into Reality.

One final word:

At the beginning of my talk, I mentioned the Wright Brothers.

As you all know, we are fast approaching the 100th anniversary of their historic flight.

What some of you may not know is that on the morning of December 18th, 1903, their hometown newspaper here in Ohio, *The Dayton Journal*, didn't cover the historic flight.

Instead, the headline read: "Stores filled with Christmas Shoppers."

A little upset by this, Orville and Wilbur's younger brother, Lorin, appealed to one of the reporters.

The reporter scoffed: "57 seconds, eh? If it were 57 minutes, it may have been a news item."

I'd like to make two points.

First, this reporter was clearly not representative of the state of Ohio.

Second, not everyone will take notice or immediately appreciate the progress we make.

We will no doubt take small steps before big ones. And we will have failures along the way. But when we fail, we will get right up, dust ourselves off . . . and go at it again.

And when we're done, when we reach our goals, whatever they are . . . people will know.

They will be grateful.

Air and space travel will be Faster, Better, Cheaper, Cleaner . . . and much Safer.

And America . . . will be stronger.

Thank you.

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